

May 25, 2012

US 36 Managed Lane  
Colorado Department of Transportation  
Region Six, North Engineering Section  
2000 South Holly Street  
Denver, Colorado 80222

Attention: Mark Gosselin, P.E.  
Assistant Project Director

Subject: US 36 Managed Lane Project – Toll Concession Project  
Denver, Colorado  
Value Engineering Study Report Submittal

Dear Mr. Gosselin,

In accordance with your request for VE services, we are pleased to e-mail to you an electronic copy in pdf format of the VE Study Report for the above referenced US 36 Managed Lane Project in the metro-Denver area. Upon your review, let us know of comments that require report modifications. We can make the final edits ourselves and resend the final report to you or if you decide to make the changes yourselves we can e-mail you the electronic copy of the report in word version.

This should constitute the submittal of deliverable work items as per our contract with you. Should you have any questions on the value engineering recommendations, or desire that we become involved in future phases of the project, please contact this office.

Our VE team has enjoyed working on this interesting project, and we look forward to working with CDOT on future projects.

Sincerely,

Jacobs Engineering Group, Inc.



Steven L. Kautz, PE, CVS  
VE Team Leader

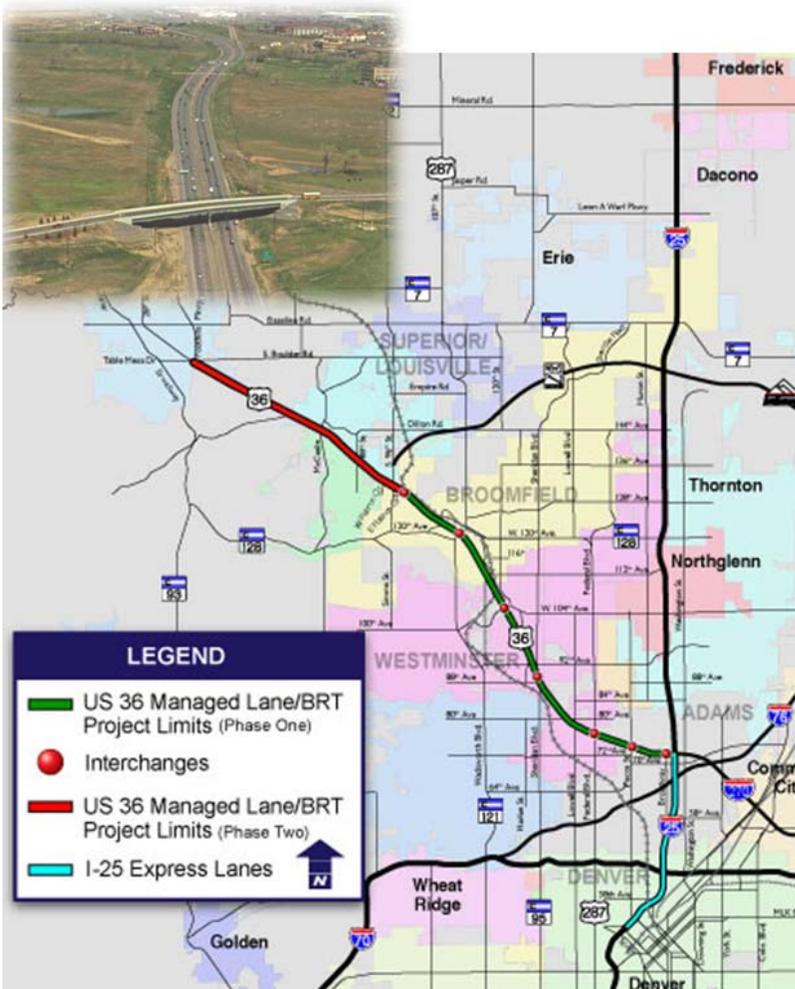
Cc: Mr. Mark Talvitie

Enclosure

# Value Engineering Study Report

## Colorado High Performance Transportation Enterprise US 36 Managed Lane Project – Toll Concession Project

Prepared for:



May 2012

Prepared by:



## FOREWARD

This Value Engineering Study Report presents the recommendations of a value engineering study of the US 36 Managed Lane Project – Toll Concession Project in the metro-Denver area, Colorado, and is submitted in accordance with the contract between the CDOT and Jacobs.

This is to certify that the value engineering study was led by the undersigned Certified Value Specialist and was conducted in accordance with standard value engineering principles and practices.



*Steven L. Kautz*

Steven L. Kautz, PE, CVS  
Value Engineering Team Leader

## **EXECUTIVE SUMMARY**

The Colorado Department of Transportation has commissioned Jacobs to conduct a 3-day value engineering (VE) study on the US 36 Managed Lane Project in the metro-Denver area. The VE Team will review the Request for Proposals (RFP) and related documents developed for the project.

The High Performance Transportation Enterprise (HTPE) was created as a division of CDOT with the responsibility to seek out, in partnership with local agencies, communities, and private industry, opportunities for innovative and efficient means of financing and delivering important surface transportation infrastructure projects in the State of Colorado. HTPE is working closely with CDOT in relation to this project. A concessionaire will be selected to finance, design and construct the US 36 Phase 2 corridor, and operate and maintain the managed lanes in the US 36 corridor and I-25 express lanes through a public-private partnership.

The Procurement Schedule shown in the draft RFP anticipates issuance of the draft RFP for industry review on June 1, 2012; issuance of the final RFP on August 17, 2012; and the proposal due date on September 21, 2012.

The overall project description is included within Section I of this report. The VE study was based upon information contained in the RFP and related documents and information provided by CDOT and their designer (Jacobs) in their design briefing on May 14, 2012. Information crucial to the success of this study was obtained from these sources and the VE team would like to thank the professionals from CDOT and Jacobs for their valuable contributions throughout the study.

The standard practice for VE studies should begin with converting the existing design or process into value engineering language, i.e., function definitions which describe the intended use of the project or process as an active verb and measurable noun. A six-step job plan is followed using the VE techniques, methodology, and a multi-disciplined team.

The intent of the VE team is not to find fault or pick at design choices. The intent is to revisit functions that represent the intentions of the design and its components and offer additional or new alternatives to satisfy those functions. A new set of eyes looks at a problem that has been in the hopper for several years and presents some additional thoughts, technology, and innovation to satisfy the client's needs.

Our objectives are to provide the broadest range of solutions possible to satisfy the user's needs at the lowest life-cycle cost. The intent of the VE team is to furnish other ways to accomplish what needs to be done without impairing quality, reliability, or function. The VE team strives to minimize operation and maintenance demands, reduce energy costs with efficient project operation, and utilize recyclable products and sustainable building materials whenever possible.

The VE study team concentrated their efforts on functional aspects of the RFP and related

documents while developing the following alternatives during their studies and recommends them for implementation by the owner. These recommendations are presented in greater detail in the following pages of this Executive Summary and Appendix B. If additional information is required during the decision making process, please contact the VE team member whose discipline is involved. Their respective telephone numbers are listed in Appendix A.

The following is a summary of the VE Study items studied and the recommended changes to those items:

- VE-1: Louisville/Superior Work.**  
**Function:** Upgraded interchange  
**VE Concept:** Include change modifications as a priced option with the option price valid for an extended period to allow IGA to be developed and executed.  
**Potential Benefits:** Results in better project operations on US 36.
- VE-2: Independent Engineer.**  
**Function:** Provide Oversight  
**VE Concept:** Require an independent engineer to make the determination that the construction work is compliant with the contract.  
**Potential Benefits:** Ensures contract compliance. Provides confidence to lenders of an independent determination of revenue readiness.
- VE-3: Coordination Requirements/Risk.**  
**Function:** Ensure coordination.  
**VE Concept:** Have agreements in place with other entities prior to the proposal due date. Alternatively, apply noncompliance points to requirements for coordination with other entities (utilities, ditch companies, local governments), in addition to coordination with Phase 1 contractor.  
**Potential Benefits:** Allows work to be completed in a coordinated and timely manner. Provides clarity in understanding roles and responsibilities.
- VE-4: Maintenance Decision.**  
**Function:** Defines responsibility.  
**VE Concept:** Make the determination of responsibility prior to proposal due date that the concessionaire is responsible for snow and ice removal to assure no impact to proposer's business case.  
**Potential Benefits:** Results in better proposals because it's

a known risk that the concessionaire can manage.

- VE-5: HOV 2/3 Decision.**  
**Function:** Reduce public subsidy.  
**VE Concept:** Change state policy now to either change to HOV 3+ or to include a trigger of when a facility changes to HOV 3+ (revenues, 2+ usage, etc.).  
**Potential Benefits:** Reduces public subsidy. Could potentially make more funds available for other projects.
- VE-6: Minimum Traffic Guarantee.**  
**Function:** Guarantee a return.  
**VE Concept:** Include a guaranteed minimum on traffic and revenue.  
**Potential Benefits:** Could potentially reduce public subsidy and make more funds available for other projects.
- VE-7: NEPA Risk.**  
**Function:** Defines technical requirements.  
**VE Concept:** Obtain NEPA determination prior to proposal due date.  
**Potential Benefits:** Better overall procurement process and proposals.
- VE-8: Procurement Schedule.**  
**Function:** Improve process.  
**VE Concept:** Delay release of draft RFP until some of the high-risk items have been determined (maintenance, back office, HOV policy, IGAs). Need an integrated set of documents to go out as the draft RFP.  
**Potential Benefits:** Provides improved likelihood of a successful project.
- VE-9: Escrow Documents.**  
**Function:** Eliminate unnecessary requirement.  
**VE Concept:** Eliminate requirement for escrow for design and construction documents.  
**Potential Benefits:** Reduces complicated process and costs.
- VE-10: I-25 Managed Lanes.**  
**Function:** O&M of I-25.  
**VE Concept:** Developer to take over O&M responsibility of I-25 upon meeting the following additional conditions:  
- Agreement between concessionaire and E-470 related to customer service center (if applicable).  
- Termination of all other existing agreements related to

O&M where concessionaire is not part of contract.  
- Approved maintenance management plan.  
- Also recommend including a work plan for I-25 in the proposal.

**Potential Benefits:** Better project. Improved customer service.

**VE-11: Peer Review.**

**Function:** Ensure quality.

**VE Concept:** Conduct a peer review prior to issuance of a complete draft RFP.

**Potential Benefits:** Better quality RFP. Proposers have a better understanding of project. Easier to evaluate.

**VE-12: Third Party Agreements.**

**Function:** Reduces project risk; provides clarity.

**VE Concept:** Include executed IGAs with the RFP.

**Potential Benefits:** Reduces risk, resulting in lower project cost.

Our VE team believes that if the recommended VE alternatives summarized above are fully implemented into the RFP and related documents, better value in terms of lower cost, reduced construction time, less risk, or less chance of liability will be realized.

Eighteen additional items for clarification are noted and listed in Appendix B. An additional comments matrix is also included in Appendix B.

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# **I INFORMATION PHASE**

## **A. VE Study Methodology**

The VE team followed value engineering methodology precisely, using the following six-step plan:

### **Phase I - Information**

The VE team leader began the study sessions with a briefing to the team, reviewing VE principles, methodology, and study goals. It was decided to concentrate study efforts on those items involving the largest impacts on the project.

As part of the information phase of the VE study, the Request for Proposals and related documents that are listed at the end of this section were studied and discussed by each VE team member. The VE team then identified the components of the project and their specific functions. A design briefing meeting was conducted on May 14, 2012. Notes from the briefing are contained in Appendix A of this report.

### **Phase II - Speculation**

The entire team participated in the creativity effort, brainstorming various ideas for alternative ways to improve the various components of the RFP and related documents identified in Items for Speculation, in Section II.

### **Phase III - Evaluation**

The team then evaluated the alternatives identified in Section II, selecting the best alternatives to develop further. The VE team also conducted an advantages / disadvantages analysis when comparing the alternatives to the original concepts.

### **Phase IV - Development**

Individual team members are assigned tasks on the basis of their separate fields of expertise pertaining to the highest ranking alternatives. Additional help and expertise is brought in as needed. Contacts are made to better understand the original concepts. Thus, the best alternatives are developed, and a comparison to the original concepts are made to determine benefit differences.

VE proposals developed are contained in Appendix B of this report. A list of additional items that the VE Team felt needing clarifications are also contained at the end of Appendix B, along with an additional comments matrix.

## **Phase V - Presentation**

The VE team leader and team members made a presentation of the study recommendations on May 16, 2012. The minutes of the presentation are contained in Appendix A of this report. Telephone numbers of the team leader and team members are also included in Appendix A for reference if contacts are required to clarify any items.

## **Phase VI - Implementation**

If it is desired to get the VE team involved in the implementation phase, the VE team members should be contacted directly.

## **B. General Project Information**

### **1. Project Description and Corridor Information**

Subject to the terms of the concessions agreement, the scope of the concessionaire's responsibilities will include, among other things, the provisions of:

- Finance, design, and construct (including reconstruction where appropriate) the general purpose lanes and managed lanes on the section of US 36 approximately 5.1 miles in length from 88th Street to Table Mesa Drive (the Phase 2 Corridor), together with associated roadways, bridges, access ramps, pavement replacement, sound and retaining walls, bikeways and ITS improvements (collectively, the Phase 2 construction scope);
- Operate the systems and services related to the managed lanes on:
  - The Phase 2 Corridor;
  - The managed lanes on that portion of US 36 that is approximately 10.8 miles in length, from Pecos Boulevard to 88<sup>th</sup> Street (the Phase 1 Corridor); and
  - The existing, reversible I-25 express lanes, which extend for seven miles between downtown Denver and Pecos Street (the I-25 express lanes).
- Provide routine maintenance and life cycle maintenance on the managed lanes in the Phase 1 Corridor, the Phase 2 Corridor and the I-25 express lanes, and life cycle maintenance on the general purpose lanes in the Phase 1 Corridor and the Phase 2 Corridor, subject to the terms of an agreed upon plan/cost sharing arrangement with HPTE;

- If this option is selected, provide routine maintenance on the general purpose lanes in the Phase 1 Corridor and the Phase 2 Corridor;
- If this option is selected, provide snow and ice removal on the managed lanes and general purpose lanes in the Phase 1 Corridor and the Phase 2 Corridor; and
- Pay to HPTE, on the date of financial close and on the first day of each contract year, the concession fee, consisting of a payment of \$1 million at the time of financial close and, on the first day of each contract year, commencing in 2014 and ending upon termination of the concessions agreement, an amount of \$250, 000.

The following goals have been established for this concession project:

- Once operational, facilitate BRT programs, operated by RTD, at service levels consistent with the RTD IGAs;
- Once operational, maintain specified travel times in the managed lanes between downtown Denver and Boulder;
- Optimize operating and life cycle maintenance costs and provide a quality product;
- Be fully operational by July 1, 2015;
- Minimize inconvenience to the public and maximize safety of workers and traveling public; and
- Once operational, keep clearance time for injury and fatality incidents in the managed lanes of the US 36 corridor below the average for highways in the metro-Denver area.

## **2. Project Documents**

The following listed documents were provided to the VE Team:

- Draft Request for Proposals (dated 5/11/12)
- Draft US 36 Concession Agreement (dated 5/11/12)
- Draft US 36 Concession Agreement - Schedules (dated 5/11/12)
- Draft Technical Provisions – Performance and Measurement Table (4/25/12)
- Draft RPF – Schedule 5 Technical Requirements (dated 5/4/12)
- Draft Schedule 6 Service Requirements (dated 4/18/12)
- Draft Schedule 10 Noncompliance Points System (dated 5/14/12)
- Draft Schedule 15 Handback Requirements (dated 4/20/12)
- Project Map
- Segment Map
- Draft Procurement Schedule (dated 5/7/12)
- Oblique Aerial of Phase 2
- Preliminary Project Mapping of Phase 2 – Scale 1”=400’ (dated 4/4/12)

## II SPECULATION PHASE

### A. Summary of VE Effort

Value engineering is not a critical review, constructability review, or cost cutting exercise. It is a problem solving technique that bypasses learned responses to produce alternative solutions achieving all required functions of the original design at the least cost over the life of the facility. It is a team effort which follows an established, organized, job plan and problem identification format that promotes objectivity and stimulates creativity. When the VE methodology is followed precisely, beneficial results are assured.

A value engineering team must be willing to challenge criteria and opinions, many of which may have been maintained by historical continuity or outdated policy or practices and not by repeated assessments of their current validity. Value engineering follows a methodology of distinct phases, relies upon teamwork, and the increase in creativity resulting from the synergism of a multi-disciplined group. It searches for and uses current technology to achieve the **value engineering goal: To creatively furnish technically sound alternatives to satisfy the user's needs at the lowest life-cycle cost.**

Value engineering examines systems or designs and breaks them into components which are then described in terms of intended use. The intended use (the purpose for the component's existence) called a function, is described in just two words, an active verb and a measurable noun.

Generally, ideas are put through two sieves, an alternative analysis followed by an advantages/ disadvantages analysis. The selected alternative is developed as the recommended solution.

## **B. Items for Speculation**

Ideas are generated through brainstorming each poor value function. **Items for Speculation** were generated and are listed below.

### **Items for Speculation**

1. Coordination requirements/risk
2. Maintenance decision
3. Back office decisions
4. Louisville/Superior work
5. Changing conditions over 50-year period – auxiliary lanes
6. HOV 2/3 decision
7. Maximum subsidy
8. Minimum traffic guarantee
9. NEPA risk
10. Right-of-way risk
11. Procurement schedule
12. Schedule for Alternative Technical Concepts (ATC)
13. Independent Engineer
14. Escrow documents
15. Taking over I-25 Managed Lanes
16. Liquidated damages
17. Agreements with third parties
18. Peer review

### **III EVALUATION PHASE**

During this phase of the VE study, preliminary screening of each item generated during the speculation phase was conducted. **VE Study Proposals** for these items are included in Appendix B of this report. Ideas were judged based on the ability to satisfy function and then evaluated in terms of advantages and disadvantages.

## **IV DEVELOPMENT PHASE**

During this phase of the study, the best viable alternatives from the evaluation phase were further developed and then compared to the original concept. After backup information was developed, the VE recommendations were finalized and benefits such as lower cost, reduced construction time, less risk, or less chance of liability were determined

The detailed **VE Study Proposals** for the items are included in their entirety in Appendix B of this report.

## **V PRESENTATION PHASE**

The VE presentation was held at 9:30 am on May 16, 2012 in the Jacobs downtown Denver office in the Big Thompson Conference Room. The **VE Presentation Notes** are included in Appendix A of this report. The recommendations presented along with additional items for clarification and comments matrix are included in Appendix B of this report.

# APPENDIX

## A. VE Team and Meetings

1. VE Team Participants
2. Design Briefing Notes
3. VE Presentation Notes

## B. VE Study Worksheets

1. VE Study Proposals

- Study Item VE-1 (Louisville/Superior Work)
- Study Item VE-2 (Independent Engineer)
- Study Item VE-3 (Coordination Requirements)
- Study Item VE-4 (Maintenance Decision)
- Study Item VE-5 (HOV 2/3 Decision)
- Study Item VE-6 (Minimum Traffic Guarantee)
- Study Item VE-7 (NEPA Risk)
- Study Item VE-8 (Procurement Schedule)
- Study Item VE-9 (Escrow Documents)
- Study Item VE-10 (I-25 Managed Lanes)
- Study Item VE-11 (Peer Review)
- Study Item VE-12 (Third Party Agreements)

2. Additional Items for Clarification
3. Additional Comments Matrix

## Appendix A

### A. VE Team and Meetings

#### 1. VE Study Team Participants

Names of VE team members, agency representatives, and design firm personnel are as follows:

<b>VE Team Members</b>	<b>Organization</b>	<b>Phone No.</b>	<b>Email Address</b>
Steve Kautz	VE Team Leader	(425) 452-8000	<a href="mailto:steven.kautz@jacobs.com">steven.kautz@jacobs.com</a>
Monica Pavlik	FHWA	(720) 963-3012	<a href="mailto:monica.pavlik@dot.gov">monica.pavlik@dot.gov</a>
Brian Middleton	Jacobs	(303) 299-2173	<a href="mailto:brian.middleton@jacobs.com">brian.middleton@jacobs.com</a>
Kim Daily	Jacobs	(519) 904-1668	<a href="mailto:kim.daily@jacobs.com">kim.daily@jacobs.com</a>
Mary Speck	VE Team Coordinator	(720) 359-3054	<a href="mailto:mary.speck@jacobs.com">mary.speck@jacobs.com</a>

<b>Owner/Stakeholder</b>	<b>Organization</b>	<b>Phone No.</b>	<b>Email Address</b>
Mark Gosselin	CDOT	(303) 656-5635	<a href="mailto:mark.gosselin@dot.state.co.us">mark.gosselin@dot.state.co.us</a>
John Schwab	CDOT	(303) 915-0139	<a href="mailto:john.schwab@dot.state.co.us">john.schwab@dot.state.co.us</a>
Shawn Cutting	FHWA	(720) 963-3033	<a href="mailto:shawn.cutting@dot.gov">shawn.cutting@dot.gov</a>
Nick Farber	HPTE	(303) 757-9448	<a href="mailto:nicholas.farber@dot.state.co.us">nicholas.farber@dot.state.co.us</a>
Bob Hays	CDOT	(303) 913-3085	<a href="mailto:robert.hays@dot.state.co.us">robert.hays@dot.state.co.us</a>
Scott Rees	CDOT	(970) 290-0080	<a href="mailto:scott.rees@dot.state.co.us">scott.rees@dot.state.co.us</a>
Vincent Dolan	KPMG	(512)501-5342	<a href="mailto:vdolan@kpmg.com">vdolan@kpmg.com</a>
Mark Talvitie	Jacobs	(303) 223-5819	<a href="mailto:mark.talvitie@jacobs.com">mark.talvitie@jacobs.com</a>
Pamela Bailey-Campbell	Jacobs	(303)820-4833	<a href="mailto:pamela.bailey@jacobs.com">pamela.bailey@jacobs.com</a>

## 2. Design Briefing Meeting Notes

DATE: May 14, 2012

TIME: 9:00 a.m.

LOCATION: Jacobs Offices (Laramine Conference Room)  
717 17<sup>th</sup> St., Denver, CO

### ATTENDEES:

Steve Kautz	Jacobs - VE Facilitator
Kim Daily	Jacobs
Brian Middleton	Jacobs
Monica Pavlik	FHWA
Mary Speck	Jacobs - VE Coordinator
Mark Gosselin	CDOT R4
Pamela Bailey-Campbell	Jacobs
Mark Talvitie	Jacobs

The design briefing was held on Monday, May 14, 2012, starting at approximately 9:00 a.m. in the Laramie Conference Room at Jacobs' offices, located at 717 17<sup>th</sup> Street, Denver, CO 80202.

The design briefing was presented by members of the design team, as follows:

Mark Gosselin	Project Overview
Pamela Bailey-Campbell	Tolling Overview
Mark Talvitie	Additional Information

### CDOT/HPTE Relationship

HPTE is a division of CDOT created by FASTER legislation – CDOT is the delivery organization; HPTE is financing/operations and can't outsource work. On Phase 1 – HPTE played a role in TIFIA loan, CDOT did design-build procurement. Phase 2 – HPTE is taking lead on procurement process (KPMG is financial advisor; Hogan Lovells preparing agreements/documents; Jacobs preparing performance criteria – design-build and maintenance).

### Phase 2 Project

US 36 Corridor connects Denver and Boulder. Total budget for the Phases 1 and 2 corridor is \$311 million. EIS for corridor completed 2009. Preferred Alternative - \$1 billion in improvements. Phase 1 ROD for entire corridor, managed lanes, and other improvements. Phase 1 refers to Phase 1 ROD. Phase 2 refers to Phase 2 ROD.

Phase 1 design-build contract has been awarded (11 miles from Federal to 88<sup>th</sup> St.). Phase 2

is the P3 project (5.1 miles, reconstructing current facility and adding buffer-separated managed lanes). The Concessionaire will complete the corridor and operate the managed lanes. Physical construction – rebuilding entire cross section, adding managed lanes. Phase 2 – bridges, replacing one bridge and widening one bridge. ITS equipment being installed – CDOT will own and operate.

The project has an aggressive schedule. Phase 1 completion – Dec 2014. Requested July 2015, but design-build contractor accelerated schedule.

### **Financing**

Phase 1 project funded with grants; Phase 2 is funded with TIFIA loan backed by managed lanes tolls. Concept of Operations – make sure we have a high level of enforcement. Transponders will be required on HOVs; license plate recognition to charge others.

Responsibility for TIFIA will rest with Concessionaire. Plan is that Phase 1 TIFIA loan will be taken over by Concessionaire and Concessionaire will take out an additional TIFIA loan. Concessionaire will take over Operations and Maintenance – Phase 1 when delivered; Phase 2 as it comes on line. Model based on Concessionaire operating the managed lanes only.

Original TIFIA loan – treated as whole corridor. Set up to have an extension for Phase 2. Approved to apply for TIFIA for Phase 2. How long? There was a fast turnaround last time. Terms will be modified. Whose risk is it if the terms change? Interest rate risk on CDOT. Overall financing? Probably on Concessionaire. TIFIA office – hasn't ever taken an existing loan and assigned it to Concessionaire.

Expecting \$15 million from RTD. Nothing yet in writing.

### **Procurement Schedule**

Evaluating SOQs – by 22<sup>nd</sup>, make a decision; 2 weeks later (Jun 6), issue RFP; proposals due August.

### **Operations**

Option for VE team to consider – that the Concessionaire would also maintain the general purpose lanes. Would be paid for separately by CDOT.

- Challenge is that CDOT doesn't outsource maintenance – new role. There are two CDOT regions involved (4 and 6), with different maintenance units on each end that are used to working separately. There is no facility dedicated to US 36 maintenance. Big challenge with maintenance is snow removal. Not practical to split. So, one party will do it – concessionaire or CDOT. Proposals will include options for operations and maintenance.
- How will decision be made? Upper management wants feedback from teams on cost and other items before they make a decision. By State statute, not allowed to put people out of work to bring on private parties. PR issues, control issues.

- Long-term life cycle maintenance, CDOT takes on responsibility. Concessionaire – Managed Lanes. Other issues, such as overlays – will be worked out later. Language in agreement – non-separable activities. Rolling 5-year maintenance plan. If CDOT can't do it financially, will delay until CDOT can take it over. Possible financial damages.

### **What are the goals for the project?**

- Finish the project.
- Congestion management - requirements related to bus performance (RTD).
- Generate sufficient revenues to repay debt.
- Execute a successful P3 project. This is a smaller project for using a P3 model; HPTE brought in to help get funding for improvements. CDOT also wants to try out the P3 model and generate interest for larger future P3 projects CDOT has planned.

### **Back office operations**

E-470 to provide back office operations (HPTE doesn't have its own). On Phase 1, E-470 will install toll system and operate back office; Phase 2 assumes this also to be the case. Option to try and demonstrate that HPTE can do it. Northwest Parkway has own license plate tolling (E-470 back office). Concessionaire might do license plate and back office. Having two back offices functions could be confusing to public.

### **Tolling studies**

- HOV2+; recently HOV3+.
- This is a BRT project to facilitate bus travel; but, a strong constituency of public won't be happy with HOV3+.

### **What is logic behind keeping back office approach open to proposers?**

Now – base condition, use E-470. If proposers can convince us of a better or cheaper way, we'll look at it. KPMG and Hogan Lovells want feedback from proposers.

### **Right-of-Way**

Being bought in separate process. Proceeding well. Will have a schedule of when right-of-way will be turned over to concessionaire. Ditch companies – dictate.

### **IGAs required?**

- Bikeway maintenance for whole corridor
- Water quality pond maintenance
- RTD
- Louisville/Superior improvements at McCaslin interchange – want to incorporate into the project, paying 100% of cost. Do they have enough \$\$\$? No. No approval rights for design? Just technical requirements. Louisville/Superior must issue permits for construction.

### **Other**

- No drainage issues.

- No extensive aesthetics.
- Environmental issues – risk in getting T&E species consultation and where mitigation will be done and how.
- BRT reporting – RTD has responsibility to report on bus travel times.
- Operational requirements? Concessionaire doesn't have responsibilities.

**Focus of VE session**

- Most of Phase 2 is a rural area, environmentally sensitive. The project team already has looked at ways to minimize impacts. Don't need input on that. Phase 1 – looked at design-build process in VE.
- For this Phase 2, hoping that another set of eyes would look at the process, agreement, and approach to Operations and Maintenance.
- Off the table – scope changes.
- Risk issues – is risk sufficiently defined?
- Interface points with Phase 1 and Phase 2 – potential risk
- Taking over I-25 managed lanes

The briefing ended at approximately 11:30 am.

#### 4. VE Presentation Notes

DATE: May 16, 2012

TIME: 9:30 a.m.

LOCATION: Jacobs Offices (Big Thompson Conference Room)  
717 17<sup>th</sup> St., Denver, CO

##### Attendees:

Steve Kautz	Jacobs - VE Facilitator
Kim Daily	Jacobs
Brian Middleton	Jacobs
Monica Pavlik	FHWA
Mary Speck	Jacobs - VE Coordinator

Mark Gosselin	CDOT
Pamela Bailey-Campbell	Jacobs
Mark Talvitie	Jacobs
Shaun Cutting	FHWA
John Schwab	CDOT
Bob Hays	CDOT
Scott Rees	CDOT
Vincent Dolan	KPMG
Nick Farber	HPTE

The presentation was held on Wednesday, May 16, 2012, starting at approximately 9:30 a.m. in the Big Thompson Conference Room at Jacobs' offices, located at 707 17<sup>th</sup> St, Denver, CO 80202.

After brief introductions of the VE team, design team, and others in attendance, Steve Kautz, VE facilitator, thanked HPTE and CDOT, the VE team, and the design team for their work and support of the VE study.

Steve began the information presentation with a review of the VE team's goals and the methodology and 6-step plan that the team used to conduct the study, and then presented the items for speculation. The VE team then presented the VE study items outlined below and answered questions of the attendees.

The VE team presented the Additional Items for Clarification that had been noted during the VE study. In addition, the VE team had some comments on the hard copy documents that will be entered into a comment matrix and submitted as part of the VE report.

The meeting adjourned at approximately 12:00 p.m.

### **VE Study Item VE-1**

#### **Louisville/Superior Work**

- Phase 1 ROD acknowledged there would be design exceptions, such as the interchange.
- Cost – on an option – concern that CDOT won't get a competitive bid if the cost included in the evaluation. It can be included as part of the capital cost.
- Reevaluation occurring for Phase 2 – interchange not yet included in reevaluation.

### **VE Study Item VE-2**

#### **Independent Engineer**

- Question: Is the team recommending an Independent Engineer for entire length of contract?  
Answer: Concept is to include during design-build and during implementation.
- On FasTracks, RTD hired the Concessionaire. After contract was in place, there was a joint procurement for the IE.
- Suggest including draft of IE agreement in RFP.
- Relative costs?  
This would be negotiated. Depends on scope – if just during design-build to substantial completion, less than if through total implementation. TxDOT projects – IE does owner verification testing.

### **VE Study Item VE-3**

#### **Coordination Requirements**

- No questions.

### **VE Study Item VE-4**

#### **Maintenance Decision**

- If Concessionaire is responsible, it would contract back to CDOT. CDOT could set up standards that Concessionaire would have to meet.
- If CDOT is responsible and doesn't maintain managed lanes, Concessionaire has a concern –impacts revenue. If damages included in agreement, must be greater than loss of toll revenues.

### **VE Study Item VE-5**

#### **HOV 2/3 Decision**

- To change to HOV3+ would require discussions with stakeholders –would take additional time.

### **VE Study Item VE-6**

#### **Minimum Traffic Guarantee**

- How does industry perceive this?  
Mixed – would like to see target set and sharing of risk set.

- If Concessionaire declares bankruptcy, it's not CDOT who loses money – it's the investors.

### **VE Study Item VE-7**

#### **NEPA Risk**

- Reevaluation is scheduled to complete closer to award and not before receipt of proposals. Delineation and mitigation need to happen in summer; US Fish and Wildlife signoffs in fall.
- In RFP, need to identify known risks – construction mitigation required as much as is known; where contractor can't access because of nesting, etc.
- KPMG: without environmental approval, there is no financial close.
- Question: Can we phase the reevaluation?  
Team will look into this.

### **VE Study Item VE-8**

#### **Procurement Schedule**

- Discussion that if draft RFP is solid, it builds confidence in CDOT/HPTE to conduct P3 process.

### **VE Study Item VE-9**

#### **Escrow Documents**

- Need to clarify that the recommendation refers to the design-build documents.

### **VE Study Item VE-10**

#### **I-25 Managed Lanes**

- Question: Did the team talk about not taking over I-25 until after the Effective Date?  
Did not.
- KPMG: There will be an updated condition report done.

### **VE Study Item VE-11**

#### **Peer Review**

- Will need 3 to 4 people for about a week.
- Must have all documents complete and integrated.

### **VE Study Item VE-12**

#### **Third Party Agreements**

- No questions.

## **Appendix B**

### **B. VE Study Worksheets**

#### **1. VE Study Proposals (VE-1 to VE-12)**

# VALUE ENGINEERING PROPOSAL

**PROJECT :** US 36 (Phase 2) Managed Lane  
Project/Toll Concession Project  
**LOCATION :** Colorado

**STUDY ITEM / NO. :** Louisville/Superior Work / VE-1  
**ITEM'S FUNCTION(S) :** Upgraded interchange

## ORIGINAL CONCEPT

Existing interchange remains in place. Do not incorporate change modifications to the base case.

## VE CONCEPT

Include change modifications as a priced option with the option price valid for an extended period to allow IGA to be developed and executed.

## ADVANTAGES / DISADVANTAGES

### Advantages

- 1 Stakeholder support.
- 2 Increases capacity on the structure.
- 3 Reduces design exceptions.
- 4 Eliminates the need for a change order.
- 5 Reduces cost for the Ultimate.
- 6 Eliminates risk of unknowns, such as political will, timing, schedule, cost.

### Disadvantages

- 1 Coordination with stakeholders.
- 2 Development of an IGA in a timely manner.
- 3 May have operational problems on the arterial.
- 4 Would have to be included in the Reevaluation/CatEx.

## POTENTIAL BENEFITS

Results in better project operations on US 36.

# VALUE ENGINEERING PROPOSAL

**PROJECT :** US 36 (Phase 2) Managed Lane  
Project/Toll Concession Project  
**LOCATION :** Colorado

**STUDY ITEM / NO. :** Independent Engineer / VE-2  
**ITEM'S FUNCTION(S) :** Provide oversight

## ORIGINAL CONCEPT

No Independent Engineer, therefore, no independent oversight. Without it, everything would have to go to Dispute Resolution Board.

## VE CONCEPT

Require an Independent Engineer to make the determination that the construction work is compliant with the Contract.

## ADVANTAGES / DISADVANTAGES

### Advantages

- 1 Improves bankability of the project.
- 2 Reduces opportunity for disputes.

### Disadvantages

- 1 Additional incremental cost.
- 2 Have to have a contract in place for the Independent Engineer (three-party agreement).

## POTENTIAL BENEFITS

Ensures contract compliance.  
Provides confidence to lenders of an independent determination of revenue readiness.

# VALUE ENGINEERING PROPOSAL

**PROJECT :** US 36 (Phase 2) Managed Lane  
Project/Toll Concession Project  
**LOCATION :** Colorado

**STUDY ITEM / NO. :** Coord Requirements /Risk / VE-3  
**ITEM'S FUNCTION(S) :** Ensure coordination

## ORIGINAL CONCEPT

Leaves coordination up to the Concessionaire without consequences of not properly coordinating with other entities.

## VE CONCEPT

Have agreements in place with other entities prior to the proposal due date.

Alternatively, apply noncompliance points to requirements for coordination with other entities (utilities, ditch companies, local governments), in addition to coordination with Phase 1 contractor.

## ADVANTAGES / DISADVANTAGES

Advantages

- 1 Reduces risk of schedule delays, change orders, increased costs.
- 2 Strengthens the requirement for coordination.
- 3 Doesn't leave coordination up for interpretation.

Disadvantages

- 1 Additional administrative work to track noncompliance points.
- 2 Getting the agreements in place prior to proposal due date could delay proposal schedule.

## POTENTIAL BENEFITS

Allows work to be completed in a coordinated and timely manner. Provides clarity in understanding roles and responsibilities.

# VALUE ENGINEERING PROPOSAL

**PROJECT :** US 36 (Phase 2) Managed Lane  
Project/Toll Concession Project  
**LOCATION :** Colorado

**STUDY ITEM / NO. :** Maintenance Decision / VE-4  
**ITEM'S FUNCTION(S) :** Defines responsibility

## ORIGINAL CONCEPT

Leave decision of responsibility for snow and ice removal on all lanes until evaluation phase.

## VE CONCEPT

Make the determination of responsibility prior to proposal due date that the Concessionaire is responsible for snow and ice removal to assure no impact to proposer's business case.

## ADVANTAGES / DISADVANTAGES

### Advantages

- 1 Reduces or eliminates potential for claims due to misunderstanding of performance measurement.
- 2 Ensures consistency of maintenance performance for entire facility.
- 3 Establishes a set budget for snow and ice removal.
- 4 Transfers risk for weather events to Concessionaire.

### Disadvantages

- 1 Compliance with state statutes.
- 2 May require a commitment of funds dedicated now to snow and ice removal for 50 years, which wouldn't be available for other projects.
- 3 CDOT/HPTE has new role to manage Concessionaire for maintenance.

## POTENTIAL BENEFITS

Results in better proposals because it's a known risk that the Concessionaire can manage.

# VALUE ENGINEERING PROPOSAL

**PROJECT :** US 36 (Phase 2) Managed Lane  
Project/Toll Concession Project  
**LOCATION :** Colorado

**STUDY ITEM / NO. :** HOV 2/3 Decision / VE-5  
**ITEM'S FUNCTION(S) :** Reduce public subsidy

## ORIGINAL CONCEPT

Assumes HOV 2+ according to the State's policy.

## VE CONCEPT

Change State policy now to either change to HOV 3+ or to include a trigger of when a facility changes to HOV 3+ (revenues, 2+ usage, etc.).

## ADVANTAGES / DISADVANTAGES

Advantages

- 1 Could reduce public subsidy requirement.
- 2 Makes project more attractive--more competition.
- 3 Clarifies risk of HOV policy.
- 4 Easier to get stakeholders to agree to a trigger process now, rather than making the change.

Disadvantages

- 1 Requires a change to State policy.
- 2 Requires discussions with Stakeholders.

## POTENTIAL BENEFITS

Reduces public subsidy. Could potentially make more funds available for other projects.

# VALUE ENGINEERING PROPOSAL

**PROJECT :** US 36 (Phase 2) Managed Lane  
Project/Toll Concession Project  
**LOCATION :** Colorado

**STUDY ITEM / NO. :** Min. Traffic Guarantee / VE-6  
**ITEM'S FUNCTION(S) :** Guarantee a return

<b>ORIGINAL CONCEPT</b>
No minimum traffic guarantee so Concessionaire takes on all traffic and revenue risk.
<b>VE CONCEPT</b>
Include a guaranteed minimum on traffic and revenue.
<b>ADVANTAGES / DISADVANTAGES</b>
<u>Advantages</u> 1 Reduced public subsidy. 2 Makes project more attractive - increases competition. 3 Improves the debt rating.  <u>Disadvantages</u> 1 Have to decide on what guarantee is. 2 May have to pay.
<b>POTENTIAL BENEFITS</b>
Could potentially reduce public subsidy and make more funds available for other projects.

# VALUE ENGINEERING PROPOSAL

**PROJECT :** US 36 (Phase 2) Managed Lane  
Project/Toll Concession Project  
**LOCATION :** Colorado

**STUDY ITEM / NO. :** NEPA Risk / VE-7  
**ITEM'S FUNCTION(S) :** Defines technical requirements

## ORIGINAL CONCEPT

Receive proposals prior to NEPA determination.

## VE CONCEPT

Obtain NEPA determination prior to proposal due date.

## ADVANTAGES / DISADVANTAGES

### Advantages

- 1 Reduces risk of change orders.
- 2 Determines NEPA mitigation measure requirements.

### Disadvantages

- 1 Could delay procurement process.

## POTENTIAL BENEFITS

Better overall procurement process and proposals.

# VALUE ENGINEERING PROPOSAL

**PROJECT :** US 36 (Phase 2) Managed Lane  
Project/Toll Concession Project  
**LOCATION :** Colorado

**STUDY ITEM / NO. :** Procurement Schedule / VE-8  
**ITEM'S FUNCTION(S) :** Improve process

## ORIGINAL CONCEPT

Draft RFP goes out June 1; final RFP August 17; proposals due September 21.

## VE CONCEPT

Delay release of draft RFP until some of the high-risk items have been determined (maintenance, back office, HOV policy, IGAs). Need an integrated set of documents to go out as the draft RFP.

## ADVANTAGES / DISADVANTAGES

Advantages

- 1 Reduces risk of proposers dropping out.
- 2 Improved evaluation and better proposals.
- 3 Reduces overall project risk, resulting in better prices.
- 4 Able to maintain the schedule from issuance of draft RFP to receipt of proposals, i.e. 3-1/2 months.
- 5 Builds confidence in CDOT/HPTE P3 process for this future project.

Disadvantages

- 1 Political fall-out for not meeting prior commitments.
- 2 Could delay overall schedule.

## POTENTIAL BENEFITS

Provides improved likelihood of a successful project.

# VALUE ENGINEERING PROPOSAL

**PROJECT :** US 36 (Phase 2) Managed Lane  
Project/Toll Concession Project  
**LOCATION :** Colorado

**STUDY ITEM / NO. :** Escrow Documents / VE-9  
**ITEM'S FUNCTION(S) :** Eliminate unnecessary requirement

## ORIGINAL CONCEPT

Requiring design and construction documents be placed into escrow.

## VE CONCEPT

Eliminate requirement for escrow for design and construction documents.

## ADVANTAGES / DISADVANTAGES

### Advantages

- 1 Don't have to pay for escrow or deal with escrow logistics.
- 2 Won't be relying on information that might not be applicable.

### Disadvantages

- 1 Change from current practices, but this is becoming a trend (TxDOT, RTD).

## POTENTIAL BENEFITS

Reduces complicated process and costs.

# VALUE ENGINEERING PROPOSAL

**PROJECT :** US 36 (Phase 2) Managed Lane  
Project/Toll Concession Project  
**LOCATION :** Colorado

**STUDY ITEM / NO. :** I-25 Managed Lanes / VE-10  
**ITEM'S FUNCTION(S) :** O&M of I-25

## ORIGINAL CONCEPT

Concessionaire to take over O&M responsibility of I-25 upon meeting conditions of Precedent to Effective Date.

## VE CONCEPT

Developer to take over O&M responsibility of I-25 upon meeting the following additional conditions:

- Agreement between Concessionaire and E-470 related to customer service center (if applicable).
- Termination of all other existing agreements related to O&M where Concessionaire is not part of contract.
- Approved Maintenance Management Plan.
- Also recommend including a Work Plan for I-25 in the proposal.

## ADVANTAGES / DISADVANTAGES

### Advantages

- 1 Better understanding of takeover requirements.
- 2 Reduced potential for claims related to takeover.
- 3 Smoother transition of takeover.

### Disadvantages

- 1 Added requirements.
- 2
- 3

## POTENTIAL BENEFITS

Better project. Improved customer service.

# VALUE ENGINEERING PROPOSAL

**PROJECT :** US 36 (Phase 2) Managed Lane  
Project/Toll Concession Project  
**LOCATION :** Colorado

**STUDY ITEM / NO. :** Peer Review / VE-11  
**ITEM'S FUNCTION(S) :** Ensure quality

## ORIGINAL CONCEPT

Not addressed on schedule.

## VE CONCEPT

Conduct a peer review prior to issuance of a complete draft RFP.

## ADVANTAGES / DISADVANTAGES

### Advantages

- 1 Better proposals because intent and requirements are better clarified.
- 2 Reduces likelihood of claims because of poorly integrated documents.
- 3 Reduces inconsistencies and conflicts within the documents.
- 4 Fewer changes after draft RFP is issued - could keep time between issuance of draft RFP and receipt of proposals (3-1/2 months).
- 5 Being the first P3 project to be done, confidence in the documents will be increased.

### Disadvantages

- 1 Potential delay in start of procurement schedule.
- 2 Increased administrative cost.
- 3

## POTENTIAL BENEFITS

Better quality RFP. Proposers have a better understanding of project. Easier to evaluate.

# VALUE ENGINEERING PROPOSAL

**PROJECT :** US 36 (Phase 2) Managed Lane  
Project/Toll Concession Project  
**LOCATION :** Colorado

**STUDY ITEM / NO. :** Third Party Agreements / VE-12  
**ITEM'S FUNCTION(S) :** Reduces project risk  
Provides clarity

## ORIGINAL CONCEPT

Document references issues that will be addressed in IGAs, but IGAs are not included in current documentation.

## VE CONCEPT

Include executed IGAs with the RFP.

## ADVANTAGES / DISADVANTAGES

### Advantages

- 1 Specifies requirements and obligations of third parties.
- 2 Reduces likelihood for claims.
- 3 Assures stakeholders are committed to the project.

### Disadvantages

- 1 Could delay procurement schedule.
- 2 Potential for resistance by third parties.
- 3 May require some compromises with third parties.

## POTENTIAL BENEFITS

Reduces risk, resulting in lower project cost.

## 2. Additional Items for Clarification

1. Request for Proposals (Project Goals Section 2.1f, Attachment B)  
Is goal necessary?
2. Request for Proposals (Section 3.2)  
Clarify back office services as base case and/or option ATC.
3. Request for Proposals (Section 4.32)  
DBE Goal Clarification – Per phase or throughout the whole process?
4. Request for Proposals (General Information and Delivery Requirement Section 4.32).  
DBE Goal Clarification – Is it 12% of cost or 12% of work?
5. Request for Proposals (Section 5.3)  
Discussions with proposers is limited per design/build regulations.
6. RFP Proposal Submittal Requirements  
Need to include O&M details.
7. Concession Agreement (Section 7)  
Relationship between CDOT and HPTE.  
Needs to be clear with respect to compliance monitoring.
8. Concession Agreement (Section 71.2)  
Stipend – stipend payment procedure.
9. Concession Agreement  
Provide HPTE position regarding additional infrastructure.
10. Concession Agreement  
Consider transferring R/W acquisition over to Developer.
11. Concession Agreement  
Define NTP.
12. Concession Agreement  
What is the justification for Liquidated Damages?
13. Schedule 6 (US 36 Managed Lane Section 1.2.1.1)  
Lateral limits of maintenance?

14. Schedule 6 (Section 1.4.1)  
Timing of I-25 takeover can't happen before Schedule 2, Part 1/MMP approved.
15. Schedule 6 (Staffing Section 1.7)  
Hiring criteria? (i.e., FBI check?).  
Who pays for background check?
16. Schedule 15 (Initial Residual Life Inspection Section 3.1)  
Is there an independent engineer?
17. Performance and Measurement Table  
Need criteria for design build phase, if applicable.
18. General  
Lane Closures – what are requirements?

### **3. Additional Comments Matrix**

After final review of the project documents, the following Additional Comments Matrix was developed which lists additional comments by the individual VE team members. These comments may not have been reviewed by the entire VE team.

**US 36 Managed Lanes Project/Toll Concession Project  
VE Study - Additional Comments Matrix**

<b>Document Name</b>	<b>Reviewer</b>	<b>Section #</b>	<b>Reference Point</b>	<b>Comments</b>
BM - Brian Middleton; KD - Kim Daily; MP - Monica Pavlik				
Agreement Schedules	MP	3.1	(h)	others ] - add bracket
Agreement Schedules	MP	5.5	Where is Section 4?	
Agreement Schedules	BM	Definitions	Compensation Event	What are the correct references?
Agreement Schedules	BM	Definitions	Environmental Manager	Section 11.2 circled; X references need checking and revising
Agreement Schedules	BM	Definitions	Program	... accordance with "9?" Also comment on all definitions- get in alphabetical order
Agreement Schedules	BM	Definitions	Prohibited Act - paragraph "c" :	"HPTE" circled with ?
Agreement Schedules	BM	Definitions	Prohibited Act - paragraph "c" :	";or" circled - missing next line?
Agreement Schedules	BM	Definitions	Sub-Contractor	Does this mean only direct sub-contractor?
Agreement Schedules	MP	Part 4 2.4	(iii)	Contacto circled - typo
Concession Agreement	BM	On Cover		Payout and Performance Bonds?
Concession Agreement	BM	1.3	(d) HPTE's Requirements	[ ] around it - no notes
Concession Agreement	KD	2.3	will commence the delivery of	conflicts with other segments
Concession Agreement	KD	2.7	the General Purpose lanes as a whole	if that option is chosen right?
Concession Agreement	BM	5.1	(a) (b) margin	What is purpose - Proposed or a lump sum bans - errors and omission or large categorize of no real use in disputes
Concession Agreement	BM	7.4	margin	Any penalty
Concession Agreement	BM	7.6	(a) margin	Could be a very long list. Who will monitor?
Concession Agreement	BM	9.3	Margin	Other preventative activities
Concession Agreement	BM	9.4	(a) (iii) between ... and all - claims, damages...	reasonable?
Concession Agreement	BM	11.1	(b) (i) last sentence	"and" instead of "or"
Concession Agreement	BM	11.1	(b) (iii) last sentence ... of the Site is...	is should be are
Concession Agreement	BM	11.1	(b) (v) first sentence ... Colorado will be...	add "in" responsible charge
Concession Agreement	BM	11.3	(a)	Is part of the site inspection during construction?
Concession Agreement	BM	12.5	(c)	Consider turning around so it is the Concessionaire that decides they can go back to work.
Concession Agreement	BM	12.5	(a) (iii) Differing Site Conditions	underlined no notations
Concession Agreement	BM	12.5	(b)	Is this compensable delay?
Concession Agreement	BM	12.6	(a) (ii)	Does this affect the IRR? for example if is delayed 6 months does the Concessionaire lose revenue
Concession Agreement	BM	12.6	(a) Change Procedure to:	not defined
Concession Agreement	KD	13.3	(d)	Take our HPTE;s Requirements

**US 36 Managed Lanes Project/Toll Concession Project  
VE Study - Additional Comments Matrix**

<b>Document Name</b>	<b>Reviewer</b>	<b>Section #</b>	<b>Reference Point</b>	<b>Comments</b>
BM - Brian Middleton; KD - Kim Daily; MP - Monica Pavlik				
Concession Agreement	BM	15.2	(a) "In addition to the Existing Design	Take out, start with The Concessionaire shall produce all drawings (take out further too)
Concession Agreement	BM	15.2	(b) Any to All	Comment - just ref Schedule 5
Concession Agreement	BM	15.8	Federal Requirements	State requirements?
Concession Agreement	BM	15.9	DBE/ESB	Define % of what? O + M? WIN?
Concession Agreement	BM	16.1	Cooperation with other Contractors	Compensation?
Concession Agreement	BM	16.4	Coordination with Ph 1 Construction Work	What happens if Phase 1 delayed, poor quality, no working properly?
Concession Agreement	BM	17.1	(c)	Services period?
Concession Agreement	BM	17.3	(a) (b) margin	How are these different?
Concession Agreement	BM	17.5	(b)	invoices circled with ?
Concession Agreement	BM	18.6	[and subject to obtaining the consent of the relevant manufacturer or supplier... obtain]	Consider deleting
Concession Agreement	BM	18.7	[and the HPTe reimbursing.... Section 18.6.]	Consider deleting or modifying such that costs are limited in some way.
Concession Agreement	BM	19.1	Notice	Why not part of 17
Concession Agreement	BM	20.2		Independent Engineer to perform these duties in this Section 20
Concession Agreement	BM	20.7		Not required if IE engaged to make determination of completion
Concession Agreement	BM	21.2	(a) (b)	Are these different?
Concession Agreement	BM	21.2		For how long - is this back dated or not firm PFSC Date forward to advertised date?
Concession Agreement	BM	21.4		check with 21.1 (a)?
Concession Agreement	BM	22.1		What is the goal of this section? Believe it should be a virtual warranty and that the Concessionaire is impacted by a need to close lanes/make repairs possibly through a lane rental agreement.
Concession Agreement	BM	23.4		Are there specified down times allowed or put it all lane rental basis where covered
Concession Agreement	BM	23.5		Where are metrics?
Concession Agreement	BM	23.7	Managed Lanes	Why only managed lanes and not all?
Concession Agreement	BM	23.9		Is this paragraph required? Why not rely on Schedule 28
Concession Agreement	BM	24.3	(d) (i) the next paragraph	Change to Section 24.3 (d) (ii)

**US 36 Managed Lanes Project/Toll Concession Project  
VE Study - Additional Comments Matrix**

<b>Document Name</b>	<b>Reviewer</b>	<b>Section #</b>	<b>Reference Point</b>	<b>Comments</b>
BM - Brian Middleton; KD - Kim Daily; MP - Monica Pavlik				
Concession Agreement	BM	24.4		
Concession Agreement	BM	25.1	changes in Federal requirements ... safety standards	Significant role is concessionaire Compensable?
Concession Agreement	BM	25.2	(a) the estimated costs	why?
Concession Agreement	BM	25.3	paragraph noted	?
Concession Agreement	BM	25.5	(a)	How does a proposer price these tasks? Just bid doing all work
Concession Agreement	BM	25.5	(a) agreeing contacts	typo = contracts
Concession Agreement	BM	25.5	(b) (iii) change "tenderers" to "bidders"	Through entire page
Concession Agreement	BM	26.3		Safety not Quality, Mixing design and construction
Concession Agreement	BM	27.1		Is this it for construction safety? How is design reviewed to assure a safe design?
Concession Agreement	BM	27.3		Who deals with clean up of accidents? Any investigation of accidents.
Concession Agreement	BM	28		The Concessionaire should be provided an opportunity to care/cure
Concession Agreement	BM	29.3		Does this meet Federal requirements?
Concession Agreement	BM	30.3	(a)	by who to whom?
Concession Agreement	BM	30.4	1st paragraph	delete "and" in first sentence. "And any successor to" (second line) - Who pays for the upgrade? "Endeavor to coordinate" (5th line) has underline and ?
Concession Agreement	BM	30.5	toll transaction account management services	Who sets these? Independent System - maybe part of an existing back office system. They have.
Concession Agreement	BM	30.8	Changes to HOV2+ policy	New Decision
Concession Agreement	BM	30.9	(b)	"[but such occurrence may be a Comipensation Event]" Why bracketed?
Concession Agreement	BM	30.1		Consider a minimum
Concession Agreement	BM	31.3		What happens to disputed amount?
Concession Agreement	BM	37.2	(b)	"HPTe related party" - CDOT?
Concession Agreement	BM	42.1		What about differing site conditions? -Failure to provide site; - Inspection showing all okay; -Other HPTe obligations not fulfilled
Concession Agreement	BM	42.3	(c)	Maintain planned IRR?
Concession Agreement	BM	43.4		So, say utility company fails to provide power - The concessionaire is penalized under the points system?

**US 36 Managed Lanes Project/Toll Concession Project  
VE Study - Additional Comments Matrix**

<b>Document Name</b>	<b>Reviewer</b>	<b>Section #</b>	<b>Reference Point</b>	<b>Comments</b>
BM - Brian Middleton; KD - Kim Daily; MP - Monica Pavlik				
Concession Agreement	BM	47.1		Does this prohibit any sub-contractor if xxx QA services - or is it meant to only apply to Construction and Operations subcontract?
Concession Agreement	BM	49.6		Do they have an option to perform the work requirement to bring the project up to standards or provide the funds xxxx prior to hardback?
Concession Agreement	BM	50.6	(a)	Staff?
Concession Agreement	BM	50.7 / 50.8 / 50.9	Retender	Underlined in 4 places - no notes
Concession Agreement	BM	51.5	Schedule	"Provisions of Part [ ] of Schedule" - Where is this? Is this the make whole provisions?
Concession Agreement	BM	52.4	Schedule	"Provisions of Part [ ] of Schedule" - Where is this?
Concession Agreement	BM	53.6	Concessionaire	Replace "Concessionaire" with "Subcontractor"
Concession Agreement	BM	53.9	Schedule	"Provisions of Part [ ] of Schedule" - Where is this?
Concession Agreement	BM	55.4	Schedule	"Provisions of Part [ ] of Schedule" - Where is this?
Concession Agreement	BM	58.3	last Paragraph	Performance Point Mechanism - How does this operate?
Concession Agreement	BM	71.2		What?
Performance and Measurement Table	BM		First Row	How is this supposed to work?
Performance and Measurement Table	BM	1.1		Any debris picked up in 2 hours?
Performance and Measurement Table	BM	1.2	Cat 1 - Hazard Mitigation	What is the hazard? How do you coord. ?? in 24 hours - signage?
Performance and Measurement Table	BM	1.2	Cat 1 & Cat 2- Permanent Remedy	What is difference to temp/permanent static?
Performance and Measurement Table	BM	1.2	Permanent Repair	
Performance and Measurement Table	BM	1.2	Ditto Throughout	
Request for Proposals	MP	2.1	RFP Schedule - Sep to Dec 2011	Holidays?
Request for Proposals	BM	2.3	Part 2	xxxxxx - can't read
Request for Proposals	BM	2.3	Part 3	What are these?
Request for Proposals	BM	2.3	Part 4	Review - what are these?
Request for Proposals	BM	2.3	Part 5	Review for xxxxx
Request for Proposals	BM	2.3	Part 6	Status in xxxxx ?
Request for Proposals	BM	2.3	Part 7	Review for achievability
Request for Proposals	KD	3.1	(f)	Marked with ? Only
Request for Proposals	BM	3.15		Any restriction on competing paths?

**US 36 Managed Lanes Project/Toll Concession Project  
VE Study - Additional Comments Matrix**

<b>Document Name</b>	<b>Reviewer</b>	<b>Section #</b>	<b>Reference Point</b>	<b>Comments</b>
BM - Brian Middleton; KD - Kim Daily; MP - Monica Pavlik				
Request for Proposals	KD	3.17	Paragraph Under (b)	60 Days is Short
Request for Proposals	KD	3.18	(b)	HPTE Capital Payment adjusted up or down as shown by this run of the Base Case.... Never exceed the HPTE Capital Payment Maximum Amount
Request for Proposals	KD	3.18	First Paragraph	Is there a cap to the HPTE's liability? Or is it capped by HPTE's Maximum capital Payment? (See b)
Request for Proposals	KD	3.19	Revenue Sharing	Shouldn't the testing be spelled out?
Request for Proposals	KD	3.21		CDOT/HPTE risk
Request for Proposals	BM	4.11	6 bullet	final draft - suggests more drafts possible
Request for Proposals	MP	4.18	Alternative Configuration Concepts/Alternative Technical Concepts	Underlined terms
Request for Proposals	KD	4.24	(g)	What about added cost? Added admin costs to CDOT?
Request for Proposals	KD	4.26		What is what they propose is already with in the requirements of the TP's?
Request for Proposals	KD	4.27		FHWA rule saying that you still have to have the base proposals.
Request for Proposals	BM	4.28	(c)	Comp Agreement?
Request for Proposals	KD	4.31	(a) - HPTE will not be liable in any event	Really? Why not just require interoperability?
Request for Proposals	BM	4.32	HPTE expects the Concessionaire to facilitate...	What if they don't?
Request for Proposals	KD	4.32		12% overall? What about during the DB phase?
Request for Proposals	KD	4.37	(f)	or date as adjusted by agreement between both parties
Request for Proposals	KD	4.38	1st sentence	Would require a breakdown of the costs
Request for Proposals	KD	5.3	additional information from a Proposer...	limited to clarification only
Request for Proposals	MP	5.3		Underlined "request additional information"
Request for Proposals	KD	5.8		Separate from base proposal?
Request for Proposals	MP	6.11	(b) (i) (5)	is there a list of "value added" concepts?
Request for Proposals	MP	6.11	(b) (ii)	Is this critical if they are doing the O&M?
Request for Proposals	KD	6.11	(b) (iv)	IE?
Request for Proposals	KD	6.11	(b) (viii)	Lane closure rentals? Bank?
Request for Proposals	MP	6.15	...in its sole discretion, are	Add: "and in accordance with 23CFR636"
Request for Proposals	KD	6.19	180 days	Security is good for how long?
Request for Proposals	KD	6.20		Negotiations?

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BM - Brian Middleton; KD - Kim Daily; MP - Monica Pavlik				
Request for Proposals	KD	6.20	(b)	Anything to be negotiated?
Request for Proposals	KD	6.6	(b)	See FHWA rules on ATC proposals
Request for Proposals	KD	8	13th bullet - Add or delete proposer...	Prior to execution of the contract?
Request for Proposals	KD	8	18th bullet - ... any Candidate that submitted an SOQ...	Rewrite - submitted a "qualifying" SOQ
Request for Proposals	MP	8	18th bullet - add to the short list of Proposers	Circled & Starred- Nothing notated
Request for Proposals	KD	8	20th bullet - Not pursue...	Developer risk?
Request for Proposals	KD	8	23rd bullet - Exercise its discretion....	Really?
Request for Proposals	KD	9	CORA	Colorado Open Records Act
Request for Proposals	KD	Attachment A	"Initial Equity IRR"	Why have two terms with the same definition?
Request for Proposals	KD	Attachment A	"State"	Any department?
Request for Proposals	KD	Attachment A	SOQ	Circled - SOQ - using term to define the term
Request for Proposals	MP	Attachment B	2.1 (f) circled and "managed lanes" underlined	GP? How is this calculated and measured?
Request for Proposals	KD	B	Corridor Stakeholder 1st paragraph	improve mobility and economic opportunity
Request for Proposals	KD	B	Project Goals 4th bullet	July 1, 2015 - short!
Request for Proposals	KD	B	Project Goals 6th bullet	Yikes! Who is this dependent on?
Request for Proposals	KD	B - Vol I & I-A	A. n. - accommodating Ultimate Configuration	why would this be a value added concept? This should be a requirement
Request for Proposals	KD	B - Vol I & I-A	B.	Timeframe between this scope and ultimate is what?
Request for Proposals	KD	B - Vol I & I-A	D.	Is this determined by input from locals? If so, why or how can this be described?
Request for Proposals	KD	Complete Form	2.A.	Why?
Request for Proposals	KD	XX..		
Request for Proposals	KD	Complete Form	2.B. a.b.	Why?
Request for Proposals	KD	XX..		
Request for Proposals	KD	Complete Form	2.C.	Why?
Request for Proposals	KD	XX..		
Request for Proposals	KD	Complete Form	4.A. Complete detailed	To what level?
Request for Proposals	KD	XX..		
Request for Proposals	KD	Complete Form	6.A.	Would depend on final design
Request for Proposals	KD	XX..		
Request for Proposals	KD	Complete Form	8.A.g.	Would depend on final plans, Lane closure banks?
Request for Proposals	KD	XX..		

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Request for Proposals	KD	Complete Form XX..	8Ba - include efforts to maximize the number of people Notes on blank page	What efforts?
Request for Proposals	MP			1. Responsive 6.5 2. Pass-Fail 6-8-10 Technical Financial 3. Evaluation rating 6.11
Schedule 10	BM	Exhibit A	15, 16, 17 - "... is equal to..."	add "or more than" - What happens if a driver happens to drive slowly causing traffic speeds to be low or brakes a lot causing ripple effects
Schedule 15	KD	1. Introduction	Last bullet	2. Hand back Plan crossed out
Schedule 15	BM	1. Introduction	Last bullet	2. Hand back Plan crossed out
Schedule 15	KD	1. Introduction	First Paragraph	Maintained circled, as now of, Direct circled, Services Period underlined. No notes
Schedule 15	BM	2	1st paragraph, last sentence...	fifth underlined, Seems very early since some items have a 5 year useful life
Schedule 15	BM	2	Last paragraph - Managed lanes circled twice	Should be for the entire project for which they are an responsible (option for GP lanes could be included) or else what?
Schedule 15	KD	2. Hand back Plan	1st Paragraph - .... Acceptance from HPTE.	
Schedule 15	KD	2. Hand back Plan	Last paragraph, Concessionaire shall Certify in writing to HPTE...	Does this have any legal ground or value?
Schedule 15	KD	3.1	1st paragraph	Add paren: (including those set forth in Appendix A.)
Schedule 15	KD	3.1	1st paragraph	an independent testing organization- who pays?
Schedule 15	BM	3.1	1st sentence - between 65 and 60 months...	Too early, useful life of some elements only 5 years
Schedule 15	BM	3.1	Concessionaire circled	CA says HPTE will perform
Schedule 15	KD	3.3	...30 days before ... 30 days following	circled, no notes
Schedule 15	KD	4.1	Last Paragraph	Marked but no notes
Schedule 15	KD	5	First bullet "Handback Certificate"	What are the consequences of not getting these?
Schedule 5	KD	1.1	1st paragraph	reconstruction sp?, environmental(ly), Dec 24th 2012 - really?, widening the footprint
Schedule 5	KD	1.1	1st paragraph	environmental - add "ly" cleared, Dec 24th 2012 - really?, widening the footprint
Schedule 5	KD	1.1	1st paragraph	Dec 24th 2012 - really?, widening the footprint

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Schedule 5	KD	1.1	1st paragraph	The Phase 2 Construction Work includes widening - add "the footprint" -of US 36
Schedule 5	KD	1.1	2nd paragraph	Could there be a conflict? Are there exact limits?
Schedule 5	KD	1.2.1	1. Portland Cement Concrete Pavement	Why is this specified?
Schedule 5	KD	1.2.3	1	Parallel to roadway?
Schedule 5	KD	1.2.4	2	Schedule delay?
Schedule 5	KD	1.2.5	2	ETC - consistency. ETC System... System integrator - When will the specification be ready? Concessionaire needs to know what he has to accommodate.
Schedule 5	KD	1.2.5	3 - Bus on Shoulders	Not sure what this means
Schedule 5	KD	1.2.5		Does this have to be approved by RTD?
Schedule 5	KD	2.1	"Work"	Does this include O & M too?
Schedule 5	KD	2.1.1	1st para, 3rd row	remove ( ) from WBS
Schedule 5	KD	Table 2.1	Level III	Warranty - Is there a warranty?
Schedule 5	KD	2.1.2.1	percent complete circled	physical or financial
Schedule 5	KD	2.1.2.3	2.K Progress photographs	Definition?
Schedule 5	KD	2.1.2.3	6. g	How would developer know this?
Schedule 5	KD	2.1.3.2.6	Recover Schedule	Why not resource load also?
Schedule 5	KD	2.1.3.4.3	1 - non-working days	Take into consideration CDOT holidays?
Schedule 5	KD	3.7	3rd row - 1st column	Preliminary Level Plan Sets - circled, no comment
Schedule 5	KD	5.1.1	2nd Paragraph	Is this standard?
Schedule 5	KD	5.1.4	Final Plans circled with Really? All marked	Whole paragraph - Needed?
Schedule 5	KD	5.1.6	3rd sentence 1:1 basis	in like?
Schedule 5	KD	5.1.7	3rd paragraph - BRT	Who collects money? Is this relevant?
Schedule 5	KD	5.3.5.3	Paragraph marked	High risk
Schedule 5	KD	5.5	Materials and Construction Requirements - wildlife biologist	For DB phase only?
Schedule 5	KD	5.5	(b)	Bracketed paragraph - Comment - Risk
Schedule 5	KD	6.2.1	1st Paragraph	Are these really different? Could HPTe;s decision cause a price increase? Sept 21, 2012 - why this date?
Schedule 5	KD	6.2.1	2nd Paragraph	Are these in place?
Schedule 5	KD	6.2.2	1st paragraph - shall notify "all"	"all" of the ones listed? Of the ones relevant to the work? Notify them of what?

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BM - Brian Middleton; KD - Kim Daily; MP - Monica Pavlik				
Schedule 5	KD	6.2.2	2nd and 3rd Paragraphs	Third Party risk taken on by concessionaire. Id the risk reduced by the CDOT/Ditch agreements? Clarifying certain items?
Schedule 5	KD	6.2.2	4th Paragraph	So who pays for this?
Schedule 5	KD	6.2.5	2nd Paragraph - submitted to HPTE	When? This should be standard procedure anyway
Schedule 5	KD	6.2.5	4th Paragraph - No work shall be allowed... The ditch.	IS this possible to achieve?
Schedule 5	KD	6.3	1st Row	Does NTP1 allow start of construction?
Schedule 5	KD	8.2.5	last sentence	Why after? This is a third party risk taken on by concessionaire. Risks could be reduced with IGAs in place prior.
Schedule 5	KD	10.1	2nd Paragraph - last sentence Pre-Paving Conference	underlined with ?
Schedule 5	KD	10.1	last paragraph, last sentence	Is there a timeframe in general for HPTE/CDOT review and approvals?
Schedule 5	KD	10.1	Table 10.1-1	Why specify this when possibly developer is responsible for maintenance for 50 years?
Schedule 5	KD	Appendix D	3rd row - 2nd and 4th columns	Risk? Maybe include very specific language stating that these are approximate time frames and can not be relied upon.
Schedule 6	BM	1.2	Direct Agreement	Is this necessary?
Schedule 6	BM	1.2	Direct Agreement a. and b.	Project description - Is it 100 % accurate? Is it also somewhere else in docs?
Schedule 6	KD	1.2		Who maintains the buffer?? Striping?
Schedule 6	KD	1.2.1.1	2nd paragraph circled	Comment - Fix
Schedule 6	BM	1.3	.. As revised from time to time.	Compensable change?
Schedule 6	BM	1.4.1.1	{upon financial close.}	I-25 Effective Date
Schedule 6	BM	1.4.1.1	.... Transferred in good and serviceable condition.	Is this time or do they need time to bring up to standard? Why not part of proposal?
Schedule 6	MP	1.4.1.1	{upon financial close.}	Should be NTP2 (Have to have management plan maintenance plan in place
Schedule 6	KD	1.4.1.1	2nd sentence	Need table and Section
Schedule 6	MP	1.4.1.1.	The I-25 Managed Lanes are being transferred...	How's this measured?
Schedule 6	MP	1.4.1.2	US 36 Phase 1	Marked but no notations

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BM - Brian Middleton; KD - Kim Daily; MP - Monica Pavlik				
Schedule 6	BM	1.4.2	last paragraph, last two sentences	Leave details in table only
Schedule 6	KD	1.7	3rd paragraph	Criminal History - who pays?
Schedule 6	KD	1.7	3rd paragraph	shall not hire... Note: What if they are already on staff?
Schedule 6	BM	1.7	notated at bottom of page	not reviewed from lane? (can't read)
Schedule 6	KD	1.8.1	3rd paragraph - ... approval at least 60 days	not consistent with section 1.4.1
Schedule 6	KD	1.8.1	3rd paragraph - Approval by CDOT...	not described in Schedule 2
Schedule 6	KD	1.8.2	1st paragraph - ... 60 days prior to the Services Commitment date....	Section 1.4.1.1.says financial close...
Schedule 6	KD	1.8.2	1st paragraph, last sentence... collection of tolls on the Phase 1 Managed Lane...	60 days prior to services commencement?
Schedule 6	KD	1.8.3	... the O & M-QMS shall also assemble...on the Concessionaire.	what does this mean?
Schedule 6	KD	1.8.5		Approval of transition plan should be included in Schedule 2.
Schedule 6	KD	1.9	first sentence	Maintained Elements typed twice in 2 places, delete one at each location
Schedule 6	MP	1.12		Would these be dependent on who maintains GP?
Schedule 6	MP	1.15.6	2nd paragraph ... Independent Engineer....	Circled - no notation
Schedule 6	KD	4.1	3rd paragraph - HPTe currently contracts with E470 to maintain the I-25 Express lane equipment	Will this be transferred to concessionaire?
Schedule 6	KD	4.1.1	2nd paragraph, last sentence	Don't you need to specify those now?
Schedule 6	KD	4.2.3	...significant weather events	Defined?
Schedule 6	KD	4.2.4	2nd paragraph, ... no routine closures are expected to be scheduled.	Really??
Schedule 6	KD	4.2.5		Who is liable for the cost increases?
Schedule 6	KD	6.2		Irrespective of Perf. Baseline, Table



VE Item	Original/VE Concept	Advantages/Disadvantages	Potential Benefits	Assessment and Implementation
<b>VE-1</b> <u>Louisville/Superior Work</u>	<b>Original Concept:</b> <ul style="list-style-type: none"> <li>Existing interchange remains in place. Do not incorporate change modifications to the base case.</li> </ul>	<b>Advantages:</b> <ol style="list-style-type: none"> <li>Stakeholder support.</li> <li>Increases capacity on the structure.</li> <li>Reduces design exceptions.</li> <li>Eliminates the need for a change order.</li> <li>Reduces cost for the Ultimate.</li> <li>Eliminates risk of unknowns, such as political will, timing, schedule, cost.</li> </ol>	<ol style="list-style-type: none"> <li>Results in better project operations on US 36.</li> </ol>	<b>Design Team Assessment:</b> <ul style="list-style-type: none"> <li>Will incorporate this work if commitments from Louisville/Superior are in place in time.</li> </ul>
	<b>VE Recommended Concept:</b> <ul style="list-style-type: none"> <li>Include change modifications as a priced option with the option price valid for an extended period to allow IGA to be developed and executed.</li> </ul>	<b>Disadvantages:</b> <ol style="list-style-type: none"> <li>Coordination with stakeholders.</li> <li>Development of an IGA in a timely manner.</li> <li>May have operational problems on the arterial.</li> <li>Would have to be included in the Reevaluation/Cat Ex.</li> </ol>		<b>Implementation:</b> <ul style="list-style-type: none"> <li>Work will be included as a priced option and will be scored in the evaluation process.</li> </ul>
<b>VE-2</b> <u>Independent Engineer</u>	<b>Original Concept:</b> <ul style="list-style-type: none"> <li>No Independent Engineer, therefore, no independent oversight. Without it, everything would have to go to Dispute Resolution Board.</li> </ul>	<b>Advantages:</b> <ol style="list-style-type: none"> <li>Project is bankable.</li> <li>Reduces opportunity for disputes</li> </ol>	<ol style="list-style-type: none"> <li>Ensures contract compliance.</li> <li>Provides confidence to lenders of an independent determination of revenue readiness.</li> </ol>	<b>Design Team Assessment:</b> <ul style="list-style-type: none"> <li>Agreed that the concept has value for the limited scope of accepting the US36 Phase 1 work and agreeing the US36 Phase 2 is ready for toll collection.</li> <li>Investigating the potential cost and means to pay these costs.</li> </ul>
	<b>VE Recommended Concept:</b> <ul style="list-style-type: none"> <li>Require an Independent Engineer to make the determination that the construction work is compliant with the Contract.</li> </ul>	<b>Disadvantages:</b> <ol style="list-style-type: none"> <li>Additional incremental cost.</li> <li>Have to have a contract in place for the Independent Engineer (three-party agreement).</li> </ol>		<b>Implementation:</b> <ul style="list-style-type: none"> <li>Will discuss this concept with the teams during early one-on-one discussions and make a determination.</li> </ul>
<b>VE-3</b> <u>Coordination Requirements</u>	<b>Original Concept:</b> <ul style="list-style-type: none"> <li>Leaves coordination up to the Concessionaire without consequences of not properly coordinating with other entities.</li> </ul>	<b>Advantages:</b> <ol style="list-style-type: none"> <li>Reduces risk of schedule delays, change orders, increased costs.</li> <li>Strengthens the requirement for coordination.</li> <li>Doesn't leave coordination up for interpretation.</li> </ol>	<ol style="list-style-type: none"> <li>Allows work to be completed in a coordinated and timely manner. Provides clarity in understanding roles and responsibilities.</li> </ol>	<b>Design Team Assessment:</b> <ul style="list-style-type: none"> <li>Agreement that high risk agreements should be in place prior to the proposal due date.</li> <li>Acknowledge that some agreements cannot be completed at that stage of the process.</li> </ul>
	<b>VE Recommended Concept:</b> <ul style="list-style-type: none"> <li>Have agreements in place with other entities prior to the proposal due date.</li> <li>Alternatively, apply noncompliance points to requirements for coordination with other entities (utilities, ditch companies, local governments), in addition to coordination with Phase 1 contractor.</li> </ul>	<b>Disadvantages:</b> <ol style="list-style-type: none"> <li>Additional administrative work to track noncompliance points.</li> <li>Getting the agreements in place prior to proposal due date could delay proposal schedule.</li> </ol>		<b>Implementation:</b> <ul style="list-style-type: none"> <li>Risk Assessment will be done and risks will be assigned to the proper party.</li> </ul>
<b>VE-4</b> <u>Maintenance Decision</u>	<b>Original Concept:</b> <ul style="list-style-type: none"> <li>Leave decision of responsibility for snow and ice removal on all lanes until evaluation phase..</li> </ul>	<b>Advantages:</b> <ol style="list-style-type: none"> <li>Reduces or eliminates potential for claims due to misunderstanding of performance measurement.</li> <li>Ensures consistency of maintenance performance for entire facility.</li> <li>Establishes a set budget for snow and ice removal.</li> <li>Transfers risk for weather events to Concessionaire.</li> </ol>	<ol style="list-style-type: none"> <li>Results in better proposals because it's a known risk that the Concessionaire can change.</li> </ol>	<b>Design Team Assessment:</b> <ul style="list-style-type: none"> <li>Agreement in the timing of the Maintenance decision.</li> </ul>
	<b>VE Recommended Concept:</b> <ul style="list-style-type: none"> <li>Make the determination of responsibility prior to proposal due date that the Concessionaire is responsible for snow and ice removal to assure no impact to proposer's business case.</li> </ul>	<b>Disadvantages:</b> <ol style="list-style-type: none"> <li>Compliance with state statutes.</li> <li>May require a commitment of funds dedicated now to snow and ice removal for 50 years, which wouldn't be available for other projects.</li> <li>CDOT/HPTE has new role to manage Concessionaire for maintenance.</li> </ol>		<b>Implementation:</b> <ul style="list-style-type: none"> <li>Decision was made to assign the snow and ice maintenance to the Concessionaire.</li> <li>Also the Proposals will include two price proposals: 1. Fence to fence routine maintenance, 2. Routine maintenance in Managed Lanes only.</li> </ul>



VE Item	Original/VE Concept	Advantages/Disadvantages	Potential Benefits	Assessment and Implementation
<p>VE-5 <u>HOV 2/3 Decision</u></p>	<p><b>Original Concept:</b></p> <ul style="list-style-type: none"> <li>Assumes HOV 2+ according to the State's policy.</li> </ul>	<p><b>Advantages:</b></p> <ol style="list-style-type: none"> <li>Could reduce public subsidy requirement.</li> <li>Makes project more attractive--more competition.</li> <li>Clarifies risk of HOV policy.</li> <li>Easier to get stakeholders to agree to a trigger process now, rather than making the change.</li> </ol>	<ol style="list-style-type: none"> <li>Reduces public subsidy. Could potentially make more funds available for other projects.</li> </ol>	<p><b>Design Team Assessment:</b></p> <ul style="list-style-type: none"> <li>General agreement with recommendation.</li> </ul>
	<p><b>VE Recommended Concept:</b></p> <ul style="list-style-type: none"> <li>Change State policy now to either change to HOV 3+ or to include a trigger of when a facility changes to HOV 3+ (revenues, 2+ usage, etc.)..</li> </ul>	<p><b>Disadvantages:</b></p> <ol style="list-style-type: none"> <li>Requires a change to State policy.</li> <li>Likely to have stakeholder resistance.</li> </ol>		<p><b>Implementation:</b></p> <ul style="list-style-type: none"> <li>Team is pursuing the option of HOV 3+ coordination with the stakeholders, DRCOG (TIP and STIP)</li> </ul>
<p>VE-6 <u>Minimum Traffic Guarantee</u></p>	<p><b>Original Concept:</b></p> <ul style="list-style-type: none"> <li>No minimum traffic guarantee so Concessionaire takes on all traffic and revenue risk.</li> </ul>	<p><b>Advantages:</b></p> <ol style="list-style-type: none"> <li>Reduced public subsidy.</li> <li>Makes project more attractive - increases competition.</li> <li>Improves the debt rating.</li> </ol>	<ol style="list-style-type: none"> <li>Could potentially reduce public subsidy and make more funds available for other projects.</li> </ol> <p>During presentation – asked to add: Increases confidence in CDOT/HPTE process and increases competition.</p>	<p><b>Design Team Assessment:</b></p> <p>While there are advantages to providing the concessionaire a guaranteed minimum amount of traffic/revenue, this is not feasible under current Colorado constitutional and state law for the Transportation Commission and not feasible for the HPTE as it does not have the resources to make a credible pledge.</p> <ol style="list-style-type: none"> <li>The HPTE presently has only one source of revenue, the I-25 HOT lanes, and the concession agreement envisions turning this revenue source over to the concessionaire. Consequently, the HPTE has no revenue source from which it can provide minimum guarantee payments in the event of a revenue shortfall on the project.</li> <li>The Colorado Department of Transportation potentially has the resources to provide such a pledge but state law does not permit the Transportation Commission to make allocations that bind future Commissions. The Commission could commit to consider annual allocations (called a moral obligation) but it cannot make a legally binding one unless it allocates the funds now and places them in escrow.</li> </ol> <p>Finally, one of the primary reasons for selecting the concession model for this corridor is the transfer of traffic and revenue risk to a concessionaire. The limited financial capacity of the HPTE at present makes it problematic for it to deliver projects under a public finance or a revenue guarantee model.</p>
	<p><b>VE Recommended Concept:</b></p> <ul style="list-style-type: none"> <li>Include a guaranteed minimum on traffic and revenue.</li> </ul>	<p><b>Disadvantages:</b></p> <ol style="list-style-type: none"> <li>Have to decide on what guarantee is.</li> <li>May have to pay.</li> </ol>		<p><b>Implementation:</b></p> <ul style="list-style-type: none"> <li>No</li> </ul>
<p>VE-7 <u>NEPA Risk</u></p>	<p><b>Original Concept:</b></p> <ul style="list-style-type: none"> <li>Receive proposals prior to NEPA determination.</li> </ul>	<p><b>Advantages:</b></p> <ol style="list-style-type: none"> <li>Reduces risk of change orders.</li> <li>Determines NEPA mitigation measure requirements.</li> </ol>	<ol style="list-style-type: none"> <li>Better overall procurement process and proposals.</li> </ol>	<p><b>Design Team Assessment:</b></p> <ul style="list-style-type: none"> <li>Understand importance of completing the environmental clearance and any associated risk.</li> </ul>
	<p><b>VE Recommended Concept:</b></p> <ul style="list-style-type: none"> <li>Obtain NEPA determination prior to proposal due date.</li> </ul>	<p><b>Disadvantages:</b></p> <ol style="list-style-type: none"> <li>Could delay procurement process.</li> </ol>		<p><b>Implementation:</b></p> <ul style="list-style-type: none"> <li>The Phase I ROD is completed and the required Re-evaluation is underway. The Project team is working diligently to complete the environmental clearance as soon as possible. Will take a phased approach of clearing as much as possible to minimize risk.</li> </ul>



VE Item	Original/VE Concept	Advantages/Disadvantages	Potential Benefits	Assessment and Implementation
<b>VE-8</b> <u>Procurement Schedule</u>	<b>Original Concept:</b> <ul style="list-style-type: none"> <li>Draft RFP goes out June 1; final RFP August 17; proposals due September 21.</li> </ul>	<b>Advantages:</b> <ol style="list-style-type: none"> <li>Reduces risk of proposers dropping out.</li> <li>Improved evaluation and better proposals.</li> <li>Reduces overall project risk, resulting in better prices.</li> <li>Able to maintain the schedule from issuance of draft RFP to receipt of proposals, i.e., 3-1/2 months.</li> </ol>	<ol style="list-style-type: none"> <li>Provides improved likelihood of a successful project.</li> </ol>	<b>Design Team Assessment:</b> <ul style="list-style-type: none"> <li>Understands the importance of a complete and accurate Concession Agreement to minimize risk and maintain trust of the short listed teams.</li> </ul>
	<b>VE Recommended Concept:</b> <ul style="list-style-type: none"> <li>Delay release of draft RFP until some of the high-risk items have been determined (maintenance, back office, HOV policy, IGAs). Need an integrated set of documents to go out as the draft RFP.</li> </ul>	<b>Disadvantages:</b> <ol style="list-style-type: none"> <li>Political fall-out for not meeting prior commitments.</li> <li>Could delay overall schedule.</li> </ol>		<b>Implementation:</b> <ul style="list-style-type: none"> <li>After the next round of thorough review of the contract documents, a decision will be made on the schedule</li> </ul>
<b>VE-9</b> <u>Escrow Documents</u>	<b>Original Concept:</b> <ul style="list-style-type: none"> <li>Requiring documents be placed into escrow.</li> </ul>	<b>Advantages:</b> <ol style="list-style-type: none"> <li>Don't have to pay for escrow or deal with escrow logistics.</li> <li>Won't be relying on information that might not be applicable.</li> </ol>	<ol style="list-style-type: none"> <li>Reduces complicated process and costs.</li> </ol>	<b>Design Team Assessment:</b> <ul style="list-style-type: none"> <li>Agreement that there is minimal value in escrowing technical Design Build.</li> <li>Important that Financial documents be escrowed.</li> </ul>
	<b>VE Recommended Concept:</b> <ul style="list-style-type: none"> <li>Eliminate requirement for escrow (clarification during presentation: for design-build documents).</li> </ul>	<b>Disadvantages:</b> <ol style="list-style-type: none"> <li>Change from current practices, but this is becoming a trend (TxDOT, RTD).</li> </ol>		<b>Implementation:</b> <ul style="list-style-type: none"> <li>Escrow bid documents. No additional cost to escrow all documents.</li> </ul>
<b>VE-10</b> <u>I-25 Managed Lanes</u>	<b>Original Concept:</b> <ul style="list-style-type: none"> <li>Concessionaire to take over O&amp;M responsibility of I-25 upon meeting conditions of Precedent to Effective Date.</li> </ul>	<b>Advantages:</b> <ol style="list-style-type: none"> <li>Better understanding of takeover requirements.</li> <li>Reduced potential for claims related to takeover.</li> <li>Smoother transition of takeover.</li> </ol>	<ol style="list-style-type: none"> <li>Reduction in risk, clarifies scope and maximizes project value.</li> </ol>	<b>Design Team Assessment:</b> <ul style="list-style-type: none"> <li>Agreed that responsibility for I-25 managed lanes should be transferred prior to completion of Phase 1</li> </ul>
	<b>VE Recommended Concept:</b> <p>Developer to take over O&amp;M responsibility of I-25 upon meeting the following additional conditions:</p> <ul style="list-style-type: none"> <li>Agreement between Concessionaire and E-470 on takeover (if applicable).</li> <li>Termination of all other existing agreements related to O&amp;M where Concessionaire is not part of contract.</li> <li>Approved Maintenance Management Plan.</li> <li>Also recommend including a Work Plan for I-25 in the proposal.</li> </ul>	<b>Disadvantages:</b> <ol style="list-style-type: none"> <li>Added requirements.</li> </ol>	<ol style="list-style-type: none"> <li>Better project.</li> <li>Improved customer service.</li> </ol>	<b>Implementation:</b> <p>Developer to take over O&amp;M responsibility of I-25 upon meeting the following additional conditions:</p> <ul style="list-style-type: none"> <li>Agreement between Concessionaire and E-470 for back office operations (if applicable).</li> <li>Termination of all other existing agreements related to O&amp;M where Concessionaire is not part of contract.</li> <li>Approved Maintenance Management Plan from the Concessionaire.</li> </ul> <p>Also recommend including a Work Plan for I-25 in the proposal.</p>
<b>VE-11</b> <u>Peer Review</u>	<b>Original Concept:</b> <ul style="list-style-type: none"> <li>Not addressed on schedule.</li> </ul>	<b>Advantages:</b> <ol style="list-style-type: none"> <li>Better proposals because intent and requirements are better clarified.</li> <li>Reduces likelihood of claims because of poorly integrated documents.</li> <li>Reduces inconsistencies and conflicts within the documents.</li> <li>Fewer changes after draft RFP is issued – could keep time between issuance of draft RFP and receipt of proposals (3-1/2 months).</li> </ol>	<ol style="list-style-type: none"> <li>Better quality RFP.</li> <li>Proposers have a better understanding of project.</li> <li>Easier to evaluate.</li> </ol> <p>During presentation – asked to add: Increases confidence in CDOT/HPTE process and increases competition.</p>	<b>Design Team Assessment:</b> <ul style="list-style-type: none"> <li>The documents available for the VE study were preliminary in nature and will go through many levels of review before being released.</li> </ul>



VE Item	Original/VE Concept	Advantages/Disadvantages	Potential Benefits	Assessment and Implementation
	<p><b>VE Recommended Concept:</b></p> <ul style="list-style-type: none"> <li>Conduct a peer review prior to issuance of a complete draft RFP.</li> </ul>	<p><b>Disadvantages:</b></p> <ol style="list-style-type: none"> <li>Potential delay in start of procurement schedule.</li> <li>Increased administrative cost.</li> </ol>		<p><b>Implementation:</b></p> <ul style="list-style-type: none"> <li>A high-level Peer Review will be conducted as time allows. In addition, a Technical Writer will review the documents for consistency, cross referencing and general clarity.</li> </ul>
<p><b>VE-12</b> <b><u>Third Party Agreements</u></b></p>	<p><b>Original Concept:</b></p> <ul style="list-style-type: none"> <li>Document references issues that will be addressed in IGAs, but IGAs are not included in current documentation.</li> </ul>	<p><b>Advantages:</b></p> <ol style="list-style-type: none"> <li>Specifies requirements and obligations of third parties.</li> <li>Reduces likelihood for claims.</li> <li>Assures stakeholders are committed to the project.</li> </ol>	<ol style="list-style-type: none"> <li>Reduces risk, resulting in lower project costs.</li> </ol>	<p><b>Design Team Assessment:</b></p> <ul style="list-style-type: none"> <li>Agreement that Third Party Agreements should be in place and included in the Concession Agreement whenever possible.</li> </ul>
	<p><b>VE Recommended Concept:</b></p> <ul style="list-style-type: none"> <li>Include executed IGAs in RFP.</li> </ul>	<p><b>Disadvantages:</b></p> <ol style="list-style-type: none"> <li>Could delay procurement schedule.</li> <li>Potential for resistance by third parties.</li> <li>May require some compromises with third parties.</li> </ol>		<p><b>Implementation:</b></p> <ul style="list-style-type: none"> <li>Risk of Third Party Agreements will be analyzed and assigned accordingly.</li> </ul>
<p><b>Additional Items for Clarification</b></p>	<p><b>VE Team Recommendations Recorded in Separate Document :</b></p>			<p><b>Design Team Implementation:</b></p> <ul style="list-style-type: none"> <li>Design Team is reviewing the Additional Items of Clarification recommendations.</li> </ul>